

**APPENDIX 3****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE****In re application of:** Bruch et al.**Application No.** 10/668,025**Filed:** September 19, 2003**Confirmation No.** 1402**For:** MICROMECHANICAL
MONOCHROMATOR WITH
INTEGRATED SLIT APERTURE FOR
MICROSPECTROMETERS IN THE UV,
VISIBLE AND INFRARED RANGE**Examiner:** Kara E. Geisel**Art Unit:** 2877**Attorney Reference No.** 7638-75725-01**CERTIFICATE OF MAILING**

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: MAIL STOP AMENDMENT
COMMISSIONER FOR PATENTS, P.O. BOX 1450,
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Attorney or Agent
for Applicant(s)

Date Mailed June 16, 2006

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DECLARATION UNDER 37 C.F.R. § 1.132

I, Dr. Reinhard Bruch, hereby declare as follows:

1. I am a co-inventor of the subject matter described and claimed by the patent application referenced above, i.e., United States application No. 10/668,025 (hereafter the '025 application). I currently am employed as the president of Applied Photonics Worldwide, Inc., the assignee of the '025 application, which is located in Reno, Nevada. I also am employed as a professor of physics at the University of Nevada Reno. I have over 25 years of experience in the field of physics, including extensive work in optical physics.

2. I understand that claims pending in the '025 application have been rejected in view of German Reference No. 1 99 55 759 A1 (Stock). I understand that Stock has been cited as allegedly anticipating certain claims pending in the '025 application, or in the alternative, as allegedly rendering the claimed embodiments obvious.

3. The embodiments shown in FIGS. 1-5 of Stock include either a prism (FIG. 1), an achromatic lens (FIGS. 2-4), and/or an integrated diffraction grating and pivotal mirror (FIGS. 3-5). In my experience, none of these embodiments are effective for use with relatively long-wavelength light (e.g., near infrared and middle infrared). In my experience, prisms are

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disadvantageous in comparison to diffraction grating because they absorb light energy. In my experience, achromatic lenses also absorb light energy and, therefore, are disadvantageous in comparison to collimator mirrors. Finally, diffraction grating cannot be integrated with a pivotal mirror to produce an effective device using currently available technology in my experience.

4. In comparison to prior art devices, the scanning monochromator embodiments represented by the new claims submitted with this Declaration generally are more compact, and/or less expensive, and/or exhibit less noise. In addition, the claimed scanning monochromator embodiments are more effective when used with near infrared and middle infrared light due, at least in part, to reduced absorption losses. Furthermore, the embodiments are compatible with multiple detectors, thus allowing a wider range of wavelengths to be analyzed.

5. All statements made herein and of my own knowledge are true and all statements made on information are believed to be true, and further, these statements were made with the knowledge that willful false statements and like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that any such willful false statements made may jeopardize the validity of the application or any patent issuing thereon.

Date:

June 16, 2006

R. Bruch
Dr. Reinhard Bruch